

Work Order ID 66760

Friday, February 25, 2011 1:33:58 PM

Page 1

Item ID: D350-636-011

Accept

Setup Start

Revision ID:

Stop

Item Name: Skidtube LH

Start Date: 2/25/2011 Start Qty: 1.00

Required Date: 3/11/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date: 11-02-25 Tooling:

Date:

QC:

Date: SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

IIN-D350-636

H

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy blue file and type labels per PPP D350-636-011 CHG 006

8/10/28

OK for BG 11/03/28

B66760

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

110



Skidtubes

Skidtubes

Skidtubes

Memo

1- Pick D2600-3 Bent

2- Deburr FWD and AFT ends, remove bending marks. Scribe batch# inside AFT end per dwg D2750

3- Drill pilot holes for blade fitting bolt holes using DT8983. Open to 0.500", deburr.

4- Locate DT8330 off of blade fitting bolt holes and drill pilot holes for blade fitting

5- Drill only two fwd step holes using DT9616. Ensure proper positioning.

6- Drill pilot holes as per Dwg D2750 sheet 4 (D2750-1 details). Drill using drill Jig DT8150 & DT8863A for first side only DT8863B for second side (detail B)

7- Clecko DT8863B on second side of tube and drill pilot holes for detail B.
SECOND SIDE

8- Open up holes for Detail B to 0.375" (4 holes per side) and blade fitting location holes to 0.500" (total of 4 holes per side) as per dwg D2750. Open up holes for ground handling and detail C to 0.500" (8 holes per side)

9- Drill pilot holes for wearplates as per Dwg D2750 using DT8108 open to 0.297".

10- Open up holes of Detail A to 0.297" (total of 2 holes per side)

BE 11/03/03

W/O:		WORK ORDER CHANGES					
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Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

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Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

11-Weld D2744 Cap as per Dwg D2750 and QSI 004. Fill grooves in bend left from bending as per QSI 004

A/R Aluminum Rod batch: ☐ M116577/M111385

BE 11/03/07

12-Grind welds flush as per Dwg D2750

120



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

8 m367

Memo

0.00

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

8 m367

Memo

0.00

Q

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

1 0 3B 11/03/10

150

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 0 3B 11/03/10

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160		0.00							
	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-Open up holes of Detail C and ground handling to 0.625" (total of 8 holes per side) as per dwg D2750.								
	2-Open up holes of Detail B to 0.750" (total of 4 holes per side) as per dwg D2750.								
	3- Open float hole to 0.500" (4 per side)								
	4-Chamfer holes of Detail B, C, ground handling and float holes per dwg D2750 (welding instructions on sheet 8)								
	5-Deburr and blow out all chips from inside of tube								
	6- Prepare tube for welding, remove alodine as required.								
	7-Bond web D2739 in place as per QSI 015 A/R <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Sikaflex-291 batch: <u>116040</u> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> exp. date: <u>11/09/12</u>								
	8- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004 (welding instructions on sheet 8) A/R <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Aluminum Rod batch: <u>M116577</u>								
	9- At section AJ-AJ drill out x-bolt spacer to 0.404"								
	10-Grind welds flush as per Dwg D2750								

JB

11/03/10

BE 11/03/10

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Cust Item ID:

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Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool # Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp11-Spot face ground handling holes section (total of 4 places per side) as per
dwg D2750

BE 4/03/08

12-Deburr holes

BE 4/03/08

170

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

8 u63/21

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8 u63/21

(H)

Quality Control

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190



HandFinish

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch.

1 BR 11-3-22

200



Powdercoat

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

Memo

0.00

Powder Coating

START TIME: 7:40
OVEN TEMPERATURE: 328°
FINISH TIME: 8:15

1 BR 11-3-22

210



QC

QC3- Inspect Part Finish

0.00

Memo

0.00

Quality Control

Inspect for foreign object per QSI 024

1 d H 11/03/28

W/O:		WORK ORDER CHANGES					
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Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

220



HandFinish

Hand Finishing

HandFinishing

Memo

1- Install inserts as per Dwg D2750

0.00

0.00

1 0 11/03/28

230



HandFinish

Hand Finishing

HandFinishing

Memo

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3" batch: N/A

3-Install blade fitting D3488-041, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: M116040

EXP DATE: 11/09

4-assemble o'ring to plug as per dwg D3492 and apply o'ring lube A/R 55-o'ring lube batch: M114189

5-Coat all exposed fasteners with "LPS Procyon" batch: 114596

0.00

0.00

1 0 11/03/23

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

240



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Sulors/26

FL

250



Packaging

Packaging

Pick Kit

0.00

Memo

0.00

Cul/3/28

①

260



QC

Quality Control

QC4- 100% Inspect kits for completeness

0.00

Memo

0.00

Sulors/26

FL

*****ensure antiseize is on AN8C21A bolts*****

W/O:		WORK ORDER CHANGES					
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Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

270

0.00



Packaging

Packaging

Memo

0.00

Packaging

Package as per PPP D350-636-011

I

280

0.00



QC21- Final Inspection - Work Order Release

QC

Memo

0.00

Quality Control

*4/13/28**OK 11/03/28**MF**11-03-28*

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Picklist Print

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Page 1

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Parent Item Name: Skidtube LH




Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev: I 02.09.25 Rearranged procedure steps KJ
IPP Rev: J 06-03-23 As per Rev D JLM
IPP Rev: K 06-07.13 As per dsi9343 EC
IPP Rev: L 07-07-28 Added SS Wearplates (Rev E) JLM Verified By: EC
IPP Rev: M 08-04-22 update steps 4, 13 DD verified by: EC
IPP Rev: N 08-09-23 revF as per dwg DD verified by: ec
IPP Rev: O 09-02-06 apply antiseize on AN8C21A bolts as per PAR09-010
DD verified by: EC IPP Rev: P 10.06.22
revise seq110 DD verf: EC IPP Rev: Q 10.10.01 as per IIN
revH DD verf: EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2594-3  O-Ring, 205 Skidtube		Manufactured	No			230	Each	1,031.000	8	8		11/03/28	

Location Loc Qty Loc Code

FP	543	
55546	19	
58191	12	
59358	12	
65518	500	
fpa	488	
61762	488	

AN960JD816

Purchased

No



1/2" washer, Alum

250

Each

89.0000

2

2

Location Loc Qty Loc Code

ST348	89	
106043	89	

106043

W/O:		WORK ORDER CHANGES					
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Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

D2744

Manufactured No

110

Each

55.0000

1

1



Cap



BE 11/03/07

Location

Loc Qty

Loc Code

LG

29

65086

29

ST

26

62715

26

D2600-3-BENT

Manufactured No

110

Each

6.0000

1

1



Extrusion Bent



BE 11/03/03

Location

Loc Qty

Loc Code

LG

6

61634

2

62764

1

64434

3

D2743

Manufactured No

160

Each

122.0000

8

8



Crossbolt Spacer



BE 11/03/08

Location

Loc Qty

Loc Code

LG

122

50281

10

57953

2

59111

10

61844

16

64003

84

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Shop Packet Print

Page 2

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Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

D2739

Manufactured No

160

Each

4.0000

1

1



350 I Beam

Location

Loc Qty

Loc Code

LG

4

64448

4

Manufactured No

160

Each

35.0000

4

4

D3490-3



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

35

60294

1

63556

24

64006

10

Manufactured No

160

Each

61.0000

4

4

D3490-1



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

61

59424

3

62450

48

64005

10

Purchased No

220

Each

3,945.000

38

38

ALS4-1032-225



Insert

Location

Loc Qty

Loc Code

PK011

3945

110768

3945

X38

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Shop Packet Print

Page 3

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Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

D3492-041

Manufactured No

230

Each

93.0000

8

8



Plug Assembly



ll 11/03/28

Location

Loc Qty

Loc Code

FP013

93

59114

1

62210

3

63994

29

65068

60

YB

D3793-3

Manufactured No

230

Each

20.0000

1

1



Wearshoe



ll 11/03/28

Location

Loc Qty

Loc Code

FP018

15

39479

1

39812

2

64447

12

FP18

4

61711

4

FP19

1

57947

1

YI

AN8C35A

Purchased No

230

Each

61.0000

1

1



BOLT



ll 11/03/28

Location

Loc Qty

Loc Code

ST345

25

116874

25

ST346

36

114442

5

115188

5

115960

26

YI

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Page 4

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 5

12

Work Order ID: 66760

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

D3793-1

Manufactured No

230 Each

25.0000

1

1



Wearshoe



11/03/28

Location

Loc Qty

Loc Code

FP018

17

39277

1

39715

2

64445

14

FP18

8

59151

1

59630

1

61710

6

11

D3488-041

Manufactured No

230 Each

17.0000

1

1



Blade Fitting Assembly, LH



11/03/28

Location

Loc Qty

Loc Code

FG008

10

62002

10

FP18

7

61689

7

11

D3794-3

Manufactured No

230 Each

19.0000

1

1



Gasket



11/03/28

Location

Loc Qty

Loc Code

FP010

3

39422

3

FP10

15

60826

1

61712

14

FP18

1

59153

1

11

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Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 6

Work Order ID: 66760

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

AN6C44A

Purchased

No

230

Each

97.0000

4

4



22 11/03/25

BOLT

Location

Loc Qty

Loc Code

FG

2

103964

2

ST344

95

111649

2

114653

1

115936

42

116874

50

X4

MS21083C8

Purchased

No

230

Each

43.0000

1

1



22 11/03/25

NUT

Location

Loc Qty

Loc Code

ST303

43

113845

5

114934

3

115594

4

115884

31

X1

D3536-25

Manufactured

No

230

Each

24.0000

1

1



22 11/03/21

Gasket

Location

Loc Qty

Loc Code

FP

12

65903

12

FP12

9

64446

9

FP-12

3

39234

3

X1

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Page 6

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

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Page 7

Work Order ID: 66760

Parent Item: D350-636-011


Parent Item Name: Skidtube LH

Start Date: 2/25/2011

Required Date: 3/11/2011


Start Qty: 1.00

Required Qty: 1.00

D3631-1 Manufactured No 230 Each 144.0000 8 8

Washer


Location Loc Qty Loc Code

ST072 144
63647 144

D3791-1 Manufactured No 230 Each 14.0000 1 1

Wearplate


Location Loc Qty Loc Code

FP017 3
39276 1
39418 2
FP17 11
62239 11

AN960C10L NAS1149C0332 Purchased No 230 Each 127.0000 38 38

washer

Location Loc Qty Loc Code

ST245 127
107534 59
108246 68

D2745 Manufactured No 230 Each 121.0000 8 8

Bushing

Location Loc Qty Loc Code

ST023 121
52311 5
59112 4
61988 4
63315 108

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Page 7

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 25, 2011 1:34:09 PM

Work Order ID: 66760

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C5A

Bolt

Purchased No

230 Each

1,024.000 34

34



U 11/03/28

Location

Loc Qty

Loc Code

ST350

1024

107862

68

108302

34

114330

11

115015

13

115371

4

115422

100

115835

194

116419

500

116549

100

V 34

D3537-1

Wearpad

Manufactured No

230 Each

33.0000 3

3



U 11/03/28

Location

Loc Qty

Loc Code

FP017

33

37749


6

65057

27

1365927

V3

AN960C816L

WASHER XNAS1149108332R

X Purchased

No

230 Each

0.0000 1

1



M 114915

U 11/03/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

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Page 9

Work Order ID: 66760

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

D3492-043

Manufactured No

230

Each

41.0000

8

8



Plug Assembly

Location

Loc Qty

Loc Code

FP

2

54682

2

FP013

39

59117

1

59190

4

63996

2

65070

32

1366981

x6

x2

AN3C6A

Purchased

No

230

Each

359.0000

4

4



BOLT

Location

Loc Qty

Loc Code

ST351

359

111982

134

116419

75

116549

50

116704

100

x4

NAS1611-013

Purchased

No

230

Each

248.0000

8

8



O-RING

Location

Loc Qty

Loc Code

FP

248

115460

100

115589

28

115812

20

116582

100

x8

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Page 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 25, 2011 1:34:10 PM

Page 10

Work Order ID: 66760

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

D3535-25

Manufactured No

230

Each

21.0000

1

1



Wearshoe



11/03/25

Location

Loc Qty

Loc Code

FP18

21

38867

1

39716

2

62233

6

65167

12

xl

D3794-1

Manufactured No

230

Each

15.0000

1

1



Gasket



11/03/25

Location

Loc Qty

Loc Code

FP010

15

39279

1

39421

2

61704

12

xl

MS21043-6

Purchased No

230

Each

546.0000

4

4



NUT



11/03/25

Location

Loc Qty

Loc Code

ST301

546

112314

546

xl

D3493-1

Manufactured No

250

Each

32.0000

2

2



Washer



11/03/25

Location

Loc Qty

Loc Code

ST062

32

62677

32

62677

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Page 10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 25, 2011 1:34:10 PM

Page 11

Work Order ID: 66760

Parent Item: D350-636-011

Parent Item Name: Skidtube LH

Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

MS21083C8

Purchased

No

250

Each

43.0000

2

2



NUT

Location

Loc Qty

Loc Code

ST303

43

113845

5

114934

3

115594

4

115884

31

AN8C21A

Purchased

No

250

Each

71.0000

2

2



BOLT

Location

Loc Qty

Loc Code

ST345

71

113558

1

114653

2

115723

8

116381

60

D3672-1

Manufactured

No

230

Each

1,077.000

8

8



Phenolic Washer

Location

Loc Qty

Loc Code

ST077

1077

42329

10

52505

67

64177

1000

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/03/20	230	Assemble with NAS 1515H3K / M111814	Jel	11/03/20	x4		

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, February 25, 2011 1:34:11 PM

Page 12

Work Order ID: 66760

Parent Item: D350-636-011

Parent Item Name: Skidtube LH



Start Date: 2/25/2011

Required Date: 3/11/2011

Start Qty: 1.00

Required Qty: 1.00

D2741

Manufactured No

250

Each

79.0000

1

1



Blade, 350 Skidtube



Location

Loc Qty

Loc Code

ST466

79

60210

6

61341

33

63589

40

61341

D3532-1

Manufactured No

250

Each

31.0000

2

2



Spacer



Location

Loc Qty

Loc Code

ST065

31

62218

31

62218

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8

7

6

5

4

3

2

1

QTY -041	QTY -042	QTY -043	QTY -044	PART NUMBER	DESCRIPTION
X				D2750-041	350 SKIDTUBE ASSEMBLY, LH
	X			D2750-042	350 SKIDTUBE ASSEMBLY, RH
		X		D2750-043	350 SKIDTUBE ASSEMBLY, LH
			X	D2750-044	350 SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3536-25	GASKET
3	3	3	3	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
1	1	1	1	D3791-1	WEARPLATE
1	1	1	1	D3793-1	WEARSHOE
1	1	1	1	D3793-3	WEARSHOE
1	1	1	1	D3794-1	GASKET
1	1	1	1	D3794-3	GASKET
38	38	38	38	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
34	34	34	34	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
38	38	38	38	AN960C10L	WASHER
1	1	1	1	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER

GENERAL NOTES:

- 1) MATERIAL: MAKE D2750-1/-2/-3/-4 FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
- 2) FINISH:
ACID ETCH, ALONDE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: D2750-041/-042/-043/-044 = 26.5 LBS
- 8) WELD PER DART QSI 004
- 9) INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED. DRILL 'F' SIZE HOLES ($\phi 0.297$) FOR WEARSHOE INSERTS
- 10) FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:
MINIMUM YIELD TENSILE STRENGTH = 35 KSI
MINIMUM ULTIMATE TENSILE STRENGTH = 38 KSI
- 11) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF
POWDER COATING WITH MEK DEGREASER.
- 12) SPACER AND PLUG INSTALLED SAME AS SECTION AJ-AJ EXCEPT HORIZONTAL
- 13) SPACER AND PLUG INSTALLED SAME AS SECTION AP-AP EXCEPT HORIZONTAL

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 66760

PH 11-02-25

RELEASED
68-07-22-10

F	INCORPORATE DSI 9413; QTY (3) D3537-1 WAS QTY (5) (ZN C8-1); D3791-1/3 REPLACES D3536-13/35 (ZN C8-1); D3794-1/3 REPLACES D3536-13/35 (ZN B8-1); ADD D3791-1 (ZN C8-1); WEARSHOE HOLES UNDER FWD/AFT SADDLE REMOVED (8 PL). WEARSHOE HARDWARE QTY UPDATED (ZN B8-1); D3488-041/-042 HARDWARE UPDATED (ZN C1-8, 9, 10, 11); ADD NOTE 12 AND 13 (ZN A6-1); REASON: REF. NCR 08-043	PH	08.07.16
E	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS, CHANGE INSERTS; ADD D3631-1; REMOVE QTY (38) NAS1515H3L, REMOVE QTY (10) NAS1515H3L, REMOVE D2741, QTY (2) AN960C816, REMOVE QTY (2) MS21083C8	CB	07.05.17
D	ADD HOLES AND SPACERS FOR APICAL FLOATS; INCORPORATE DEO 9133/9157	PH	06.01.05
C	ADD D2750-3/D2750-4; INCORPORATE D2738 AND D2740	CP	98.11.18
B	CHANGE MS24694-S293 TO AN8-16A	CP	98.09.01
A	NEW ISSUE	DS	98.04.16
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>PH</i>	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
DRAWN	<i>PH</i>		
CHECKED	<i>PH</i>	DRAWING NO.	REV. F
MFG. APPR.	<i>PH</i>	D2750	SHEET 1 OF 11
APPROVED	<i>PH</i>	TITLE	SCALE
DE APPR.	<i>PH</i>	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	COPYRIGHT © 1998 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8

7

6

5

4

3

2

1

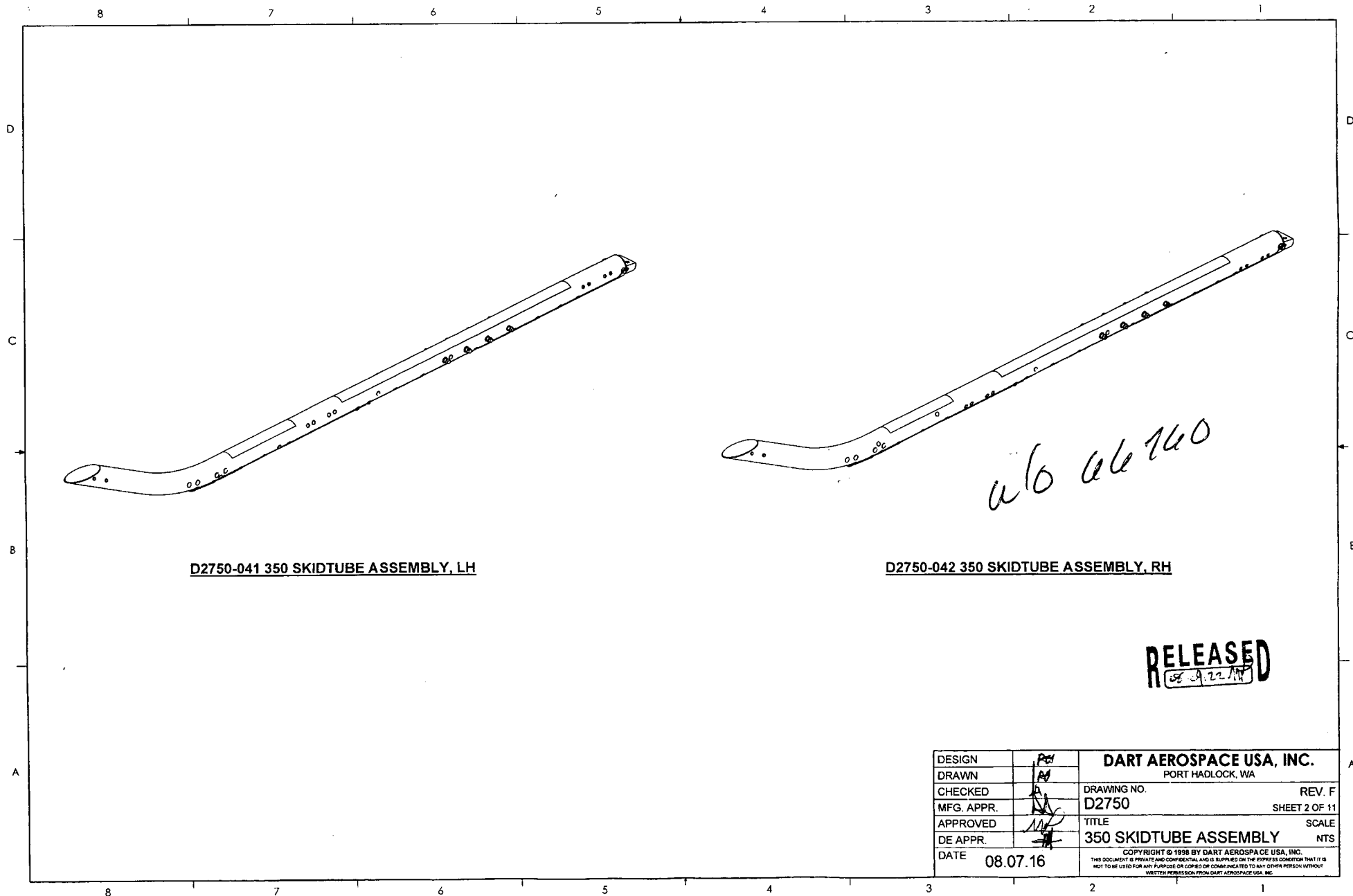
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



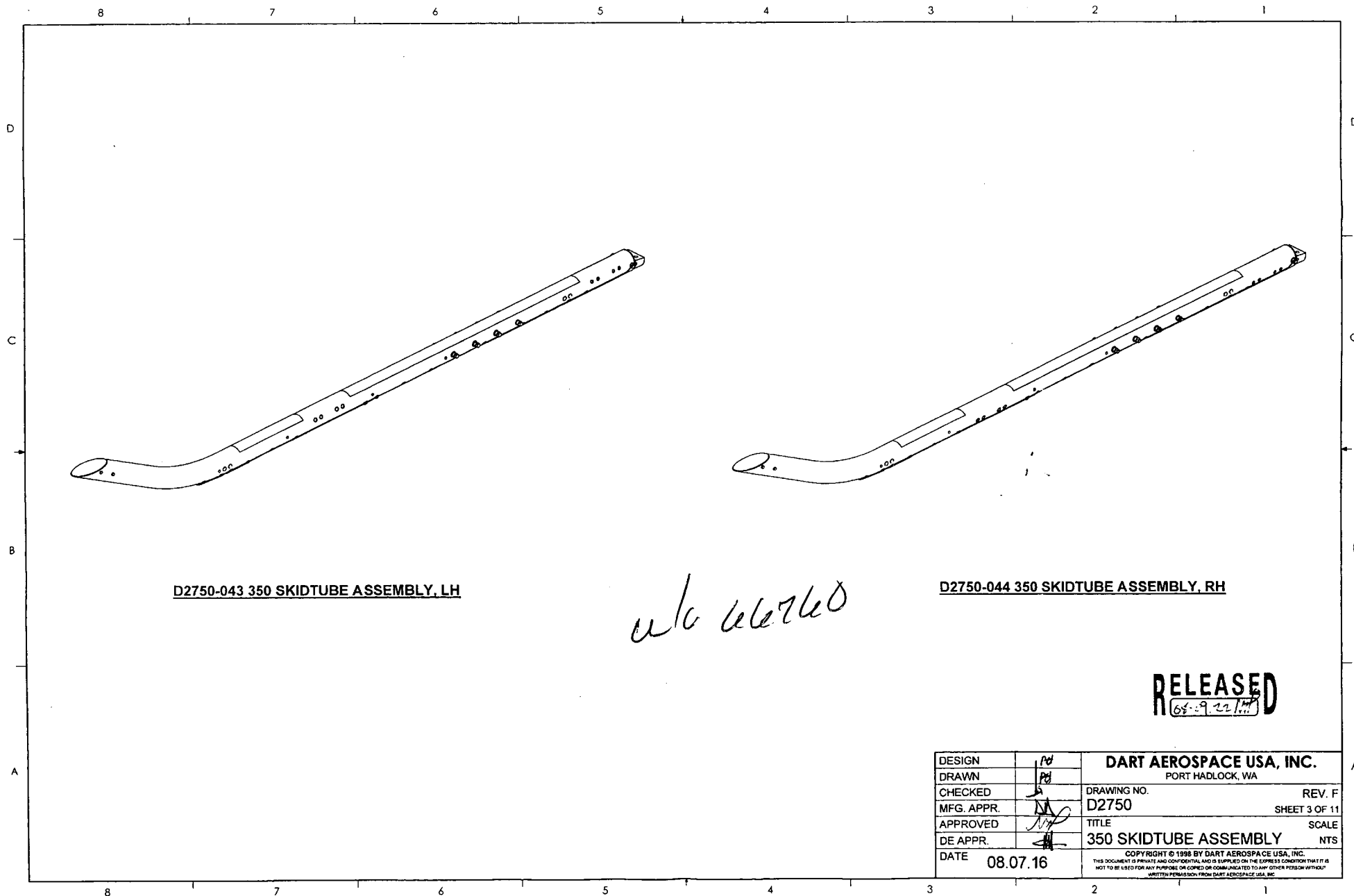
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



also checked

RELEASED
65-9-22-111

DESIGN	PD	DART AEROSPACE USA, INC.	
DRAWN	PD	PORT HADLOCK, WA	
CHECKED	NA	DRAWING NO.	REV. F
MFG. APPR.	NA	D2750	SHEET 3 OF 11
APPROVED	NA	TITLE	SCALE
DE APPR.	NA	350 SKIDTUBE ASSEMBLY	NTS
DATE	08.07.16	<small>COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.</small> <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

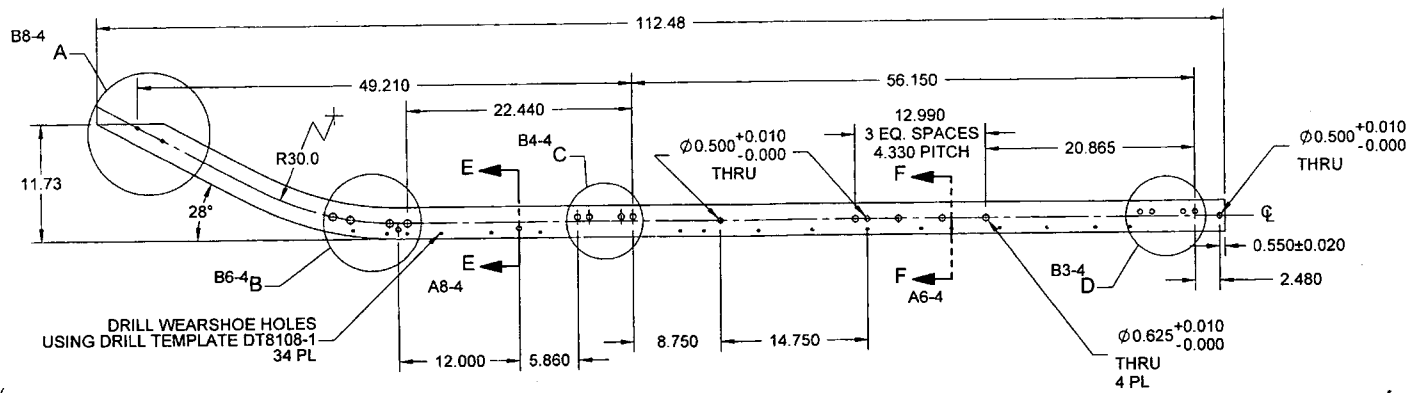
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

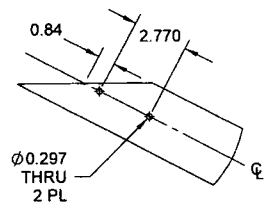
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

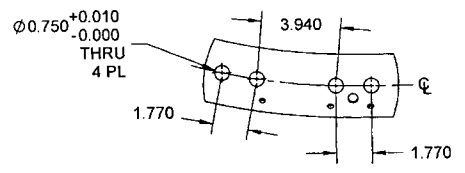


D2750-1 LH SKIDTUBE

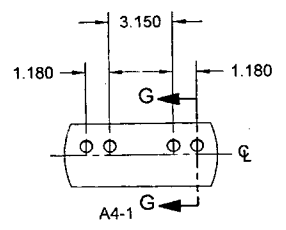
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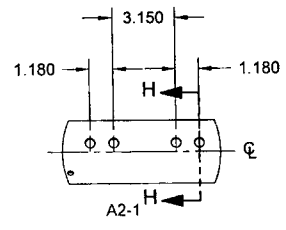
DETAIL A
SCALE 2X



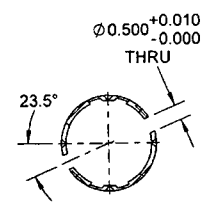
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SCALE 2X



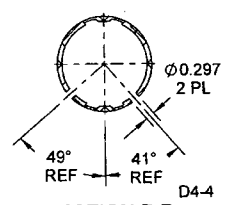
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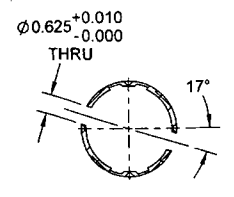
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SCALE 2X



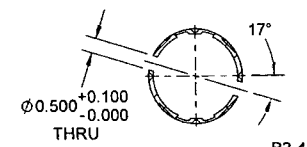
SECTION E-E
SCALE 3X, 2 PL



SECTION F-F
SCALE 3X, 17 PL



SECTION G-G
SCALE 3X, 4 PL



SECTION H-H
SCALE 3X, 4 PL

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DE APPR.		350 SKIDTUBE ASSEMBLY	NTS
DATE		08.07.16	

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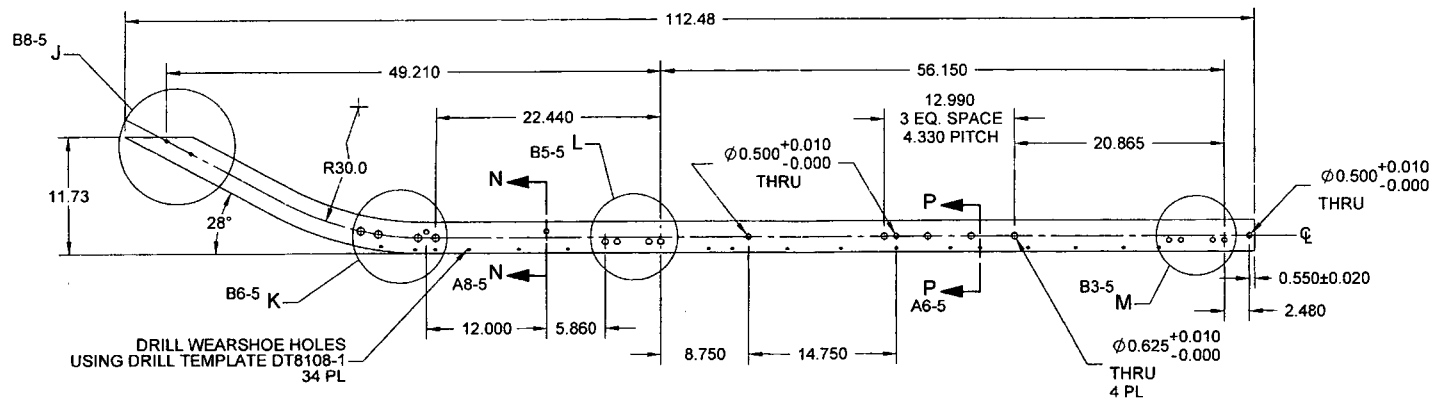
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

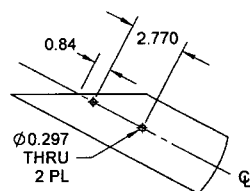
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

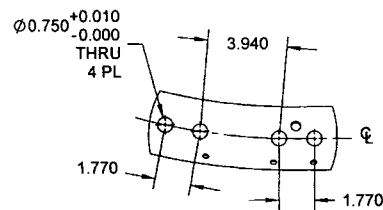


D2750-2 RH SKIDTUBE

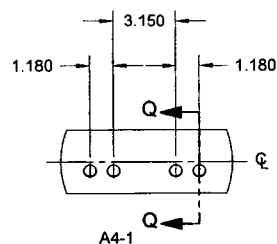
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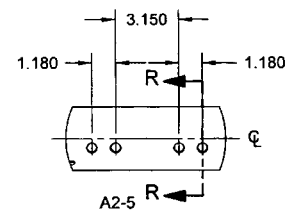
DETAIL J
SCALE 2X



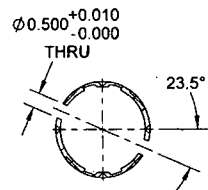
DETAIL K
SCALE 2X



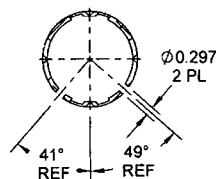
DETAIL L
SCALE 2X



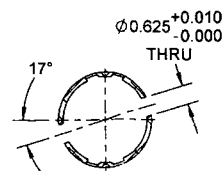
DETAIL M
SCALE 2X



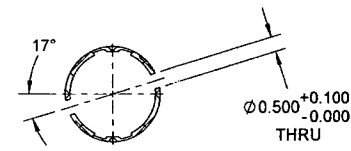
SECTION N-N
SCALE 3X, 2 PL



SECTION P-P
SCALE 3X, 17 PL



SECTION Q-Q
SCALE 3X, 4 PL



SECTION R-R
SCALE 3X, 4 PL

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

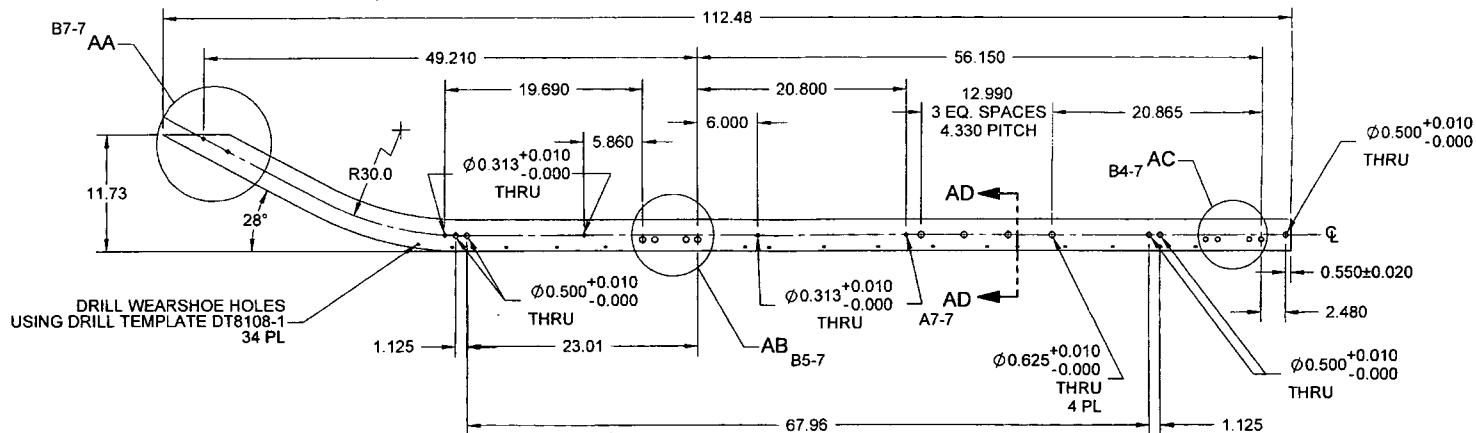
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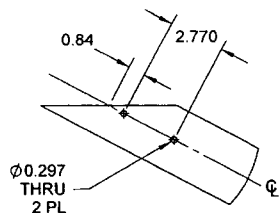
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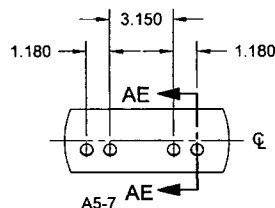
NOTE: Date & initial all entries



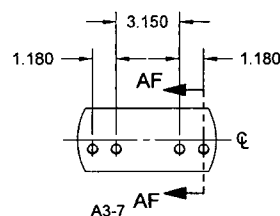
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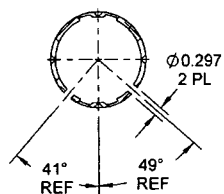
DETAIL AA
SCALE 2X



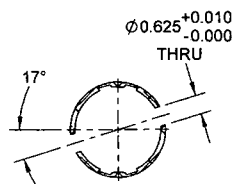
DETAIL AB
SCALE 2X



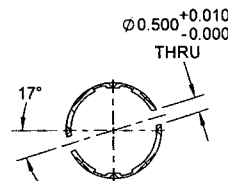
DETAIL AC
SCALE 2X



SECTION AD-AD
SCALE 3X, 17 PL



SECTION AE-AE
SCALE 3X, 4 PL



SECTION AF-AF
SCALE 3X, 4 PL

u to ab 74 8

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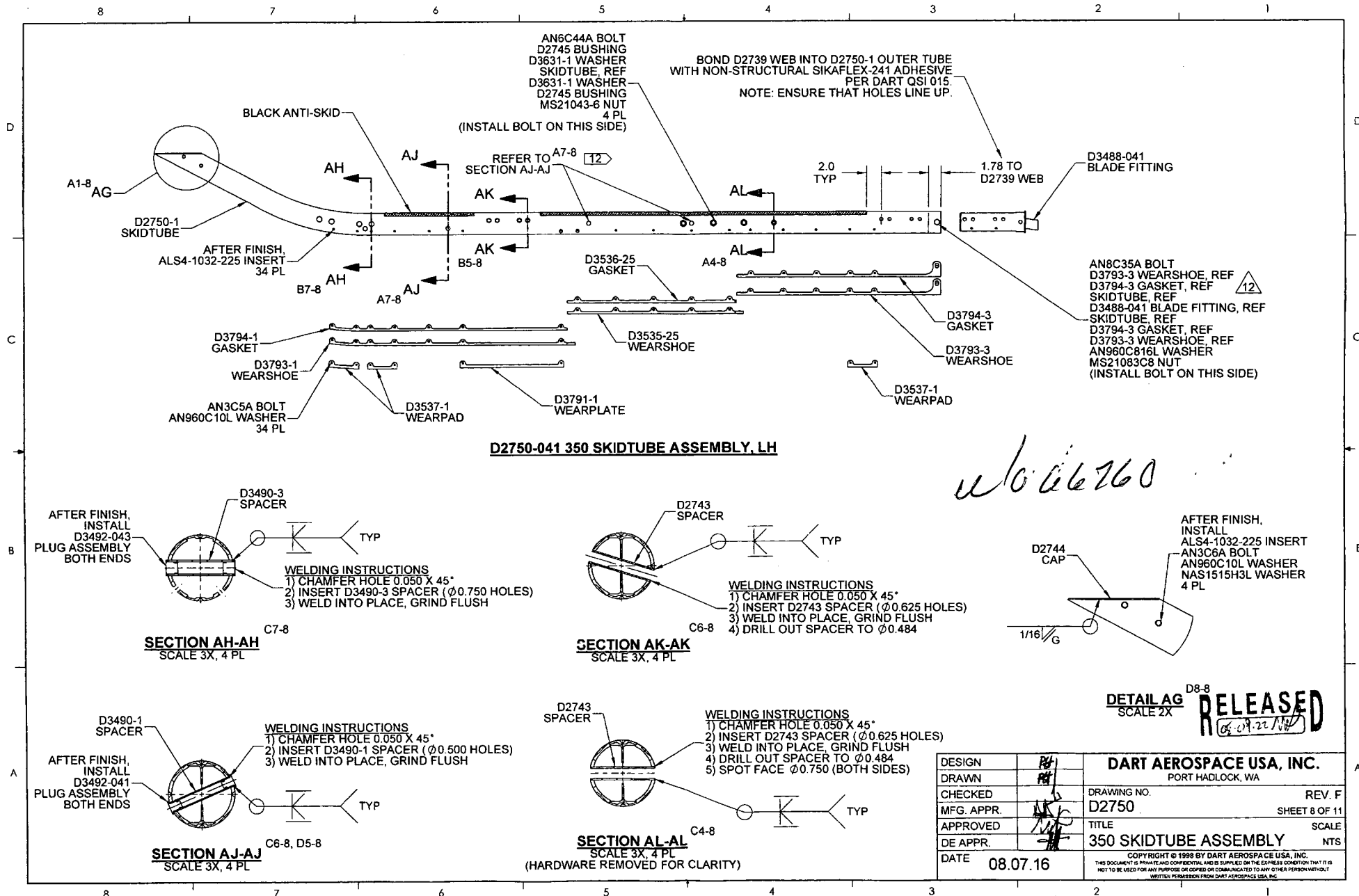
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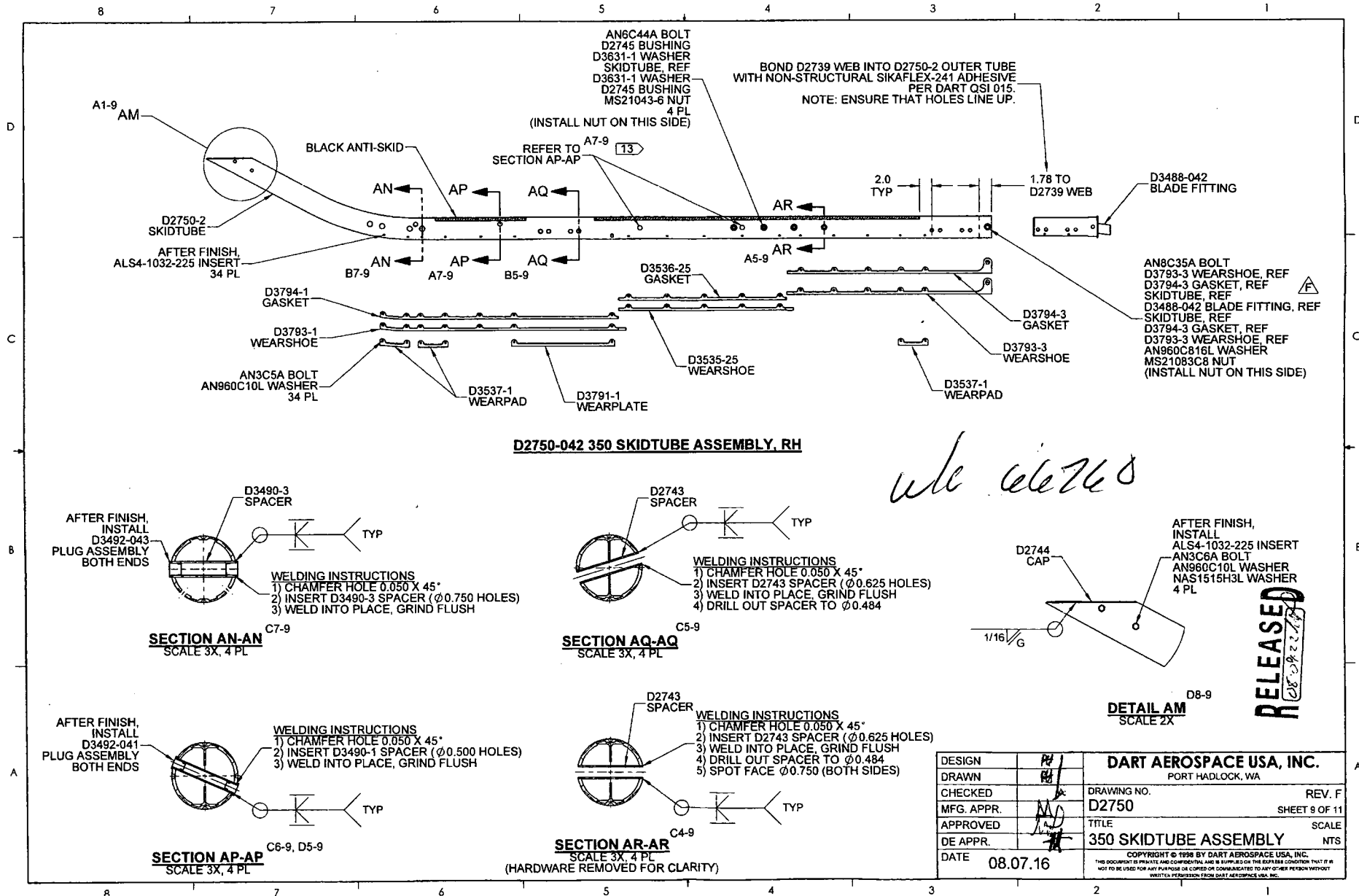
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Dart Aerospace Ltd

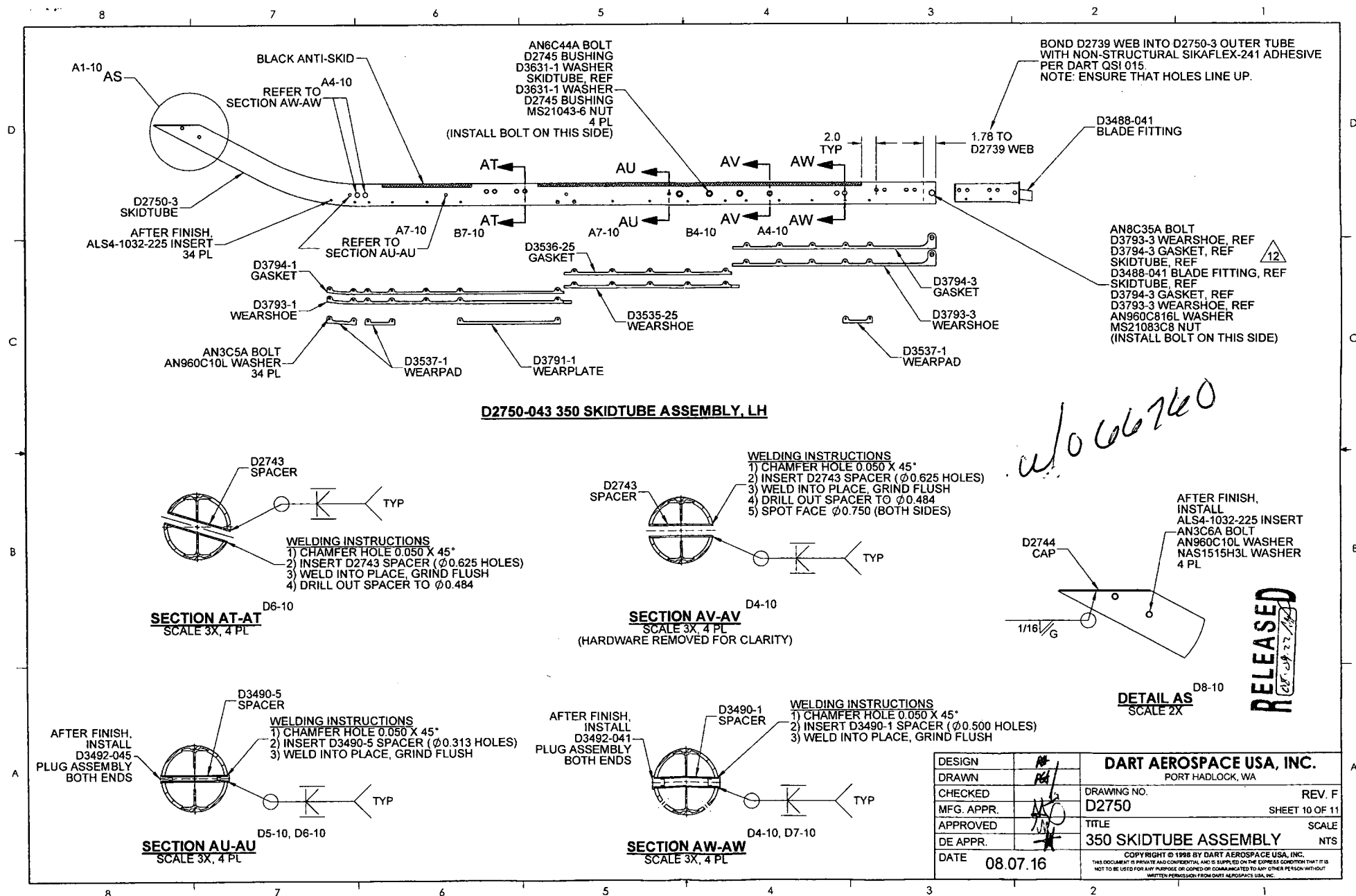
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 243

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barkley Elliott
Job number: ~~64953~~ 64953
Part number: J 350-636-016
Description: 350 skid tube
Welding Process: Tig[☒] Mig[☐]
Base material: Aluminum
Current: AC[☐] DC[☐]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[☐]
Penetration: pass[☒] fail[☐]

UNACCEPTABLE

Cracks: pass[☒] fail[☐]
Undercut: pass[☒] fail[☐]
Pin holes: pass[☒] fail[☐]
Overlap (cold lap): pass[☒] fail[☐]
Porosity (surface): pass[☒] fail[☐]
Coloration: pass[☒] fail[☐]

Qualifier J. C. Brown Date of Test Coupon 11-01-18
Welder Barkley Elliott Date of Test Coupon 11-21-18

The above named individual is qualified in accordance with AWS D17.1.2001 to weld